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DATE: September 26, 2006

PTO IDENTIFIER: Application Number 10/573,326-Conf. #9081
Patent Number

Inventor: Joaquim H. Teles et al.

MESSAGE TO: US Patent and Trademark Office

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PAGES (Including Cover Sheet): 11

CONTENTS: Submission of IPRP for application 10/573,326 (1 page)
Certificate of Transmission (1 page)
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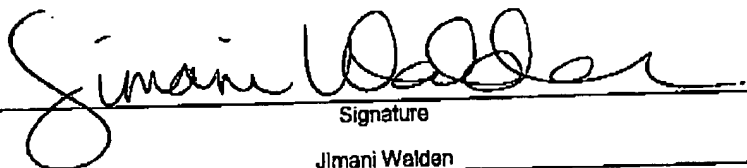
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Attorney Docket No.: 13156-00044-US1

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Submission of IPRP for application 10/573,326 (1 page)
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Docket No.: 13156-00044-US1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Joaquim H. Teles et al.

Application No.: 10/573,326

Confirmation No.: 9081

Filed: June 21, 2006

Art Unit: 1616

For: METHOD FOR PRODUCING A KETONE

Examiner: Not Yet Assigned

**SUBMISSION OF INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450


Dear Sir:

Applicants submit herewith a copy of the International Preliminary Report on Patentability issued in the corresponding international patent application. Each reference cited in the Report has been cited by Applicant in an Information Disclosure Statement filed in the captioned application.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13156-00044-US1 from which the undersigned is authorized to draw.

Dated: September 26, 2006

Respectfully submitted,

By 
Matthew J. Mason, Registration No.: 44,904
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490127

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

ISENBRUCK, Günter
Isenbruck, Bösl, Hörschler, Wichmann, Huhn
Theodor-Heuss-Anlage 12

68165 Mannheim
ALLEMAGNE

B1	
B2	
B3	
Sekr.	cc
EDV	
Abtg.	

Date of mailing (day/month/year) 08 September 2006 (08.09.2006)	13. Sep 2006/9	
Applicant's or agent's file reference B03/0721PC	First: Vorfrist:	IMPORTANT NOTIFICATION
International application No. PCT/EP2004/010681	WV:	
Applicant BASF AKTIENGESELLSCHAFT et al		International filing date (day/month/year) 23 September 2004 (23.09.2004)

1. Transmittal of the translation to the applicant.

☐

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).

☒

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

KR

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

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3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Yolaine Cussac

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TRANSLATION**PATENT COOPERATION TREATY****PCT****INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference B03/0721PC	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/EP2004/010681	International filing date (day/month/year) 23.09.2004	Priority date (day/month/year) 25.09.2003
International Patent Classification (IPC) or national classification and IPC C07C45/27, C07C49/607, C07C45/62, C07C49/413		
Applicant BASF AKTIENGESELLSCHAFT		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:

- a. ☒ (sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:
- ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
- b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____

_____ containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

Form PCT/IPEA/409 (cover sheet) (January 2004)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/010681

Box No. 1

Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-28 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-19 _____ received by this Authority on 04.07.05 with letter
- nos.* _____ received by this Authority on of 04.07.05
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of these sheets may be marked "superseded."

Form PCT/IEA/409 (Box No. 1) (January 2004)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY		International application No. PCI/EP2004/010681
Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement	
1. Statement		
Novelty (N)	Claims 1-19	YES
	Claims	NO
Inventive step (IS)	Claims	YES
	Claims 1-19	NO
Industrial applicability (IA)	Claims 1-19	YES
	Claims	NO
2. Citations and explanations (Rule 70.7)		
<p>D1: PATENT ABSTRACTS OF JAPAN, vol. 2003, no. 12, 5 December 2003 (2003-12-05) & JP 2004 059434 A (UBE IND LTD), 26 February 2004 (2004-02-26)</p> <p>D2: GB 876 531 A (STUDIENGESELLSCHAFT KOHLE M.B.H) 6 September 1961 (1961-09-06)</p> <p>D3: EP-A-1 035 119 (UBE INDUSTRIES, LTD) 13 September 2000 (2000-09-13)</p> <p>D4: EP-A-1 170 291 (UBE INDUSTRIES, LTD; EMS-CHEMIE AG) 9 January 2002 (2002-01-09)</p> <p>D5: ZAKHARKIN L I ET AL: "ISOMERIZATION OF TRANS- 1,2-EPOXY-CIS, TRANS-5,9-CYCLODODECADIE NE, TRANS-1,2-EPOXY-TRANS, TRANS-5(9-CYCLODODEC ADIENE, AND TRANS-EPOXYCYCLODODECANE TO THE CORRESPONDING KETONES BY THE ACTION OF LITHIUM AND MAGNESIUM IODIDES AND BROMIDES", JOURNAL OF ORGANIC CHEMISTRY OF THE USSR (ZHURNAL ORGANICHESKOI KHIMII), CONSULTANTS BUREAU. NEW YORK, US, vol. 26, no. 7, 1990, pages 1291-1294, XP000999526</p> <p style="text-align: right;">/...</p>		

Form PCT/IBPA/409 (Box No. V) (January 2004)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/010681

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability:
citations and explanations supporting such statement

D6: PATENT ABSTRACTS OF JAPAN, vol. 2002, no. 02,
2 April 2002 (2002-04-02) &
JP 2001 302570 A (UBE IND LTD),
31 October 2001 (2001-10-31)

D7: US-A-2 636 898 (BUCKLEY GERARD DUNSTAN)
28 April 1953 (1953-04-28)

D8: GB 649 680 A (GERARD DUNSTAN BUCKLEY; ALAN
PICKLES DRIVER; FRANCIS STEPHEN BRIDSON J)
31 January 1951 (1951-01-31).

1. The present application relates to a method for producing cyclododecadienone, cyclododecatriene being reacted with dicarbon monoxide, and cyclododecadienone being obtained. The application also relates to a method for producing cyclododecanone, comprising the following steps:
(I) reacting cyclododecatriene with dicarbon monoxide, cyclododecadienone being obtained; (II) hydrating the cyclododecadienone obtained according to step (I), thereby obtaining cyclododecanone.
2. D1 discloses the production of cyclododecanone from cyclododecatriene, cyclododecatriene being epoxidised to epoxycyclododecadiene in a first step and, in a second step, the epoxide being hydrated to cyclododecanone (P document).
3. D2 discloses the production of cyclododecanone /cyclododecadienone from cyclododecatriene, cyclododecatriene being epoxidised to

/...

Form PCT/ISA/409 (Box No. V) (January 2004)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/010681

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

epoxycyclododecadiene in a first step and, in a second step, the epoxide being catalytically restored to cyclododecanone/cyclododecadienone.

4. D3 and D4 disclose the production of epoxycyclododecadiene from cyclododecatriene.
5. D5 discloses the reaction of epoxycyclododecadiene to cyclododecadienone and the hydration of cyclododecadienone to cyclododecanone.
6. D6 discloses the hydration of epoxycyclododecadiene to cyclododecanone.
7. D7 and D8 disclose the oxidation of a cyclic olefinic compound of up to 8 C atoms to one ketone, using dicarbon monoxide.

Novelty

8. The subject matter of claims 1-19 is novel (PCT Article 33(2)). No method for producing cyclododecadienone, cyclododecatriene being reacted with dicarbon monoxide and cyclododecadienone being obtained, has been disclosed in the prior art (see paragraphs 3-7).

Inventive step

9. The subject matter of claims 1-10 does not involve an inventive step (PCT Article 33(3)):

Form PCT/ISA/409 (Box No. V) (January 2004)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/010681

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- a. Methods for producing cyclododecadienone from cyclododecatriene, cyclododecatriene being epoxidised to epoxycyclododecadiene in a first step and, in a second step, the epoxide being catalytically reacted to cyclododecadienone (see D2) are known from the prior art.
- b. The technical problem of interest is considered to be that of developing an improved method for producing cyclododecadienone;
- c. In the light of the application, cyclododecatriene can be oxidised to cyclododecadienone by means of a single-step reaction with dicarbon monoxide. In the application, however, there is only **evidence (examples)** that the method described yields a **good result** if the method is carried out **using 1,5,9-cyclododecatriene** and within a predetermined temperature range and pressure range. Since these technical features do not appear in claim 1, the subject matter of claims 1-10 does not involve an inventive step.
10. The objection raised in respect of the lack of inventive step (see point 10. above) applies similarly to the subject matter of claims 11-19.

/...

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/010681

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability:
conditions and explanations supporting such statement

Further observations

11. Although claims 1 and 11 are drafted as separate independent claims, they seem in fact to relate to the same subject matter, the only apparent difference being found in the features that, in claim 11, cyclododecadienone is hydrated to cyclododecanone in a second step. Claim 11 should therefore have been drafted independently of claim 1. In consequence, the claims are not concise and fail to satisfy the requirements of PCT Article 6.

The applicant is advised that the subject matter of claim 11 is already included in the subject matter of claim 9.